

**Effective Date:** Summer 2005-2006

**Course Description**

Prerequisite: A grade of “C” or better in MATH 1022. Credit will be given for only one of the following: PHYS 1001, PHYS 2001, PHYS 2101. Non-calculus physics for students in all medical curricula and for students in certain curricula in agriculture, forestry, home economics, arts and sciences, education and business. A study of principles and applications of mechanics, heat, and sound.

**Course Objectives**

Students will:

1. Understand the fundamental physical principles (force and motion, conservation laws, rotations, fluid mechanics, and wave motion).
2. Develop mathematical skills in using vectors, unit analysis, algebra, trigonometry, and systems of equations.
3. Develop ideas in describing physical systems mathematically.
4. Develop problem solving skills.

**Procedures to Evaluate these Objectives**

1. In-class problems after concept presentation
2. In-class exams
3. Cumulative final exam

**Use of Results of Evaluation to Improve the Course**

1. Student responses to in-class problems will be used to immediately help clarify any misunderstandings and to later adjust the appropriate course material.
2. All exams will be graded and examined to determine areas of teaching which could use improvement.
3. All evaluation methods will be used to determine the efficacy of the material presentation.

**Detailed Topical Outline**

1. One-Dimensional Motion
2. Vectors and Two-Dimensional Motion
3. The Laws of Motion
4. Work, Energy, and Power
5. Momentum and Collision
7. Circular Motion
8. Gravity
9. Rotational Dynamics
10. Solids and Fluids
11. Vibrations and Wave Motion